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ABSTRACT

The academic performance of 501 Indiana University regional campus transfer students who enrolled on the Bloomington campus for the spring 1980 or fall 1981 semester was studied. Information is presented on the percentages of male and female transfer students at each of the campuses, and the percentages by class membership the first semester at the Bloomington campus. With one exception, most campuses showed no conspicuous differences between sexes or class rank of transfer students. For both the original campus and the Bloomington campus, females obtained significantly higher grade point averages (GPAs) than males, and upperclassmen did better than underclassmen. The regional campuses were compared in relation to total math on verbal Scholastic Aptitude Test (SAT) scores and GPA for the last semester on the regional campus. While both variables showed significant differences across the regional campuses, these differences were not always in the same direction (i.e., students on one campus had the highest SAT scores but their GPAs were close to the average, while students at another campus had low SAT scores but average GPAs). Academic performance at the home campus and at the Bloomington campus were also compared when differences due to sex, class standing, and SAT scores were controlled. For four of the eight regional campuses, significant differences were found between home campus GPA and Bloomington campus GPA. Findings for specific regional campuses are included. (SW)

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INDIANA STUDIES IN HIGHER EDUCATION

Number Forty-Eight

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INDIANA UNIVERSITY 1982

PERFORMANCE OF REGIONAL CAMPUS TRANSFER STUDENTS
AT INDIANA UNIVERSITY'S BLOOMINGTON CAMPUS

Linda Morton Wakefield
Ronald G. Bullock

INDIANA STUDIES IN HIGHER EDUCATION
Number Forty-Eight

BUREAU OF EVALUATIVE STUDIES AND TESTING
DIVISION OF RESEARCH AND DEVELOPMENT
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Abstract

This study investigated the academic performance of 501 Indiana University regional campus transfer students who enrolled on the Bloomington campus for the Spring 1980 or the Fall 1981 semester. Academic performance at the home campus and at the Bloomington campus were compared controlling for differences due to sex, class standing, and SAT scores. For four of the eight regional campuses, significant differences were found between home campus GPA and Bloomington campus GPA. In all cases the home campus GPA was higher than the Bloomington campus GPA.

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Introduction

The academic performance of transfer students has been of continuing interest in higher education. Some past studies involving junior college transfer students have indicated that their subsequent grade point averages are significantly lower than their original campus GPAs (Andrews, 1968). However, in 1972, a study conducted by the Indiana University Office of Institutional Research (Trentham and Pugh, 1972) found no significant differences in performance of Indiana University regional campus transfer and nontransfer students when all were on the Bloomington campus; nor were there any significant differences in the performances of transfer students on the Bloomington campus and on the regional campus.

The present study was undertaken in order to update the statistics concerning regional campus transfer students, and also to investigate any differences which might exist among the eight regional campuses of the Indiana University system.

Methodology

In order to compare the academic performance of transfer students from the eight regional campuses of IU, the following data were obtained from the Registrar's office:

- Regional Campus
- Sex
- SAT Math
- SAT Verbal
- Class at Regional Campus semester prior to transfer
- GPA at Regional Campus semester prior to transfer
- Hours taken at Regional Campus semester prior to transfer
- Class first semester at Bloomington
- GPA first semester at Bloomington
- Hours taken first semester at Bloomington

The eight regional campuses vary tremendously in student population and thus in the number of students who transfer to the Bloomington campus each year. In order to obtain a sufficient number of students from each campus, data were collected for two semesters of transfers. Also, it is possible that students' academic performance might differ systematically from one semester to the next (i.e., students generally doing better in the Fall than in the Spring). Therefore, in order to control for any variation due to semester, and also because of the low number of transfers from some of the regional campuses, data from two different groups were combined: 1) students who were on the regional campus in the Fall of 1979 and transferred to the main campus in the Spring of 1980; and 2) students who were on the regional campus in the Spring of 1980 and transferred to the main campus in the Fall of 1980. Only those students who took 9 or more hours on the regional campus and 9 or more hours on the Bloomington campus were included in the analyses. These procedures resulted in a total of 501 transfer students in groups ranging from a low of 14 students from the Columbus campus to a high of 162 students from the Indianapolis campus.

Results

The first comparisons made dealt with the background information for transfers from the eight regional campuses. Table 1 shows the percentages of male and female transfer students at each of the campuses, and the percentages by "transfer-in" status (i.e., class membership the first semester at the Bloomington campus). With the exception of Columbus, which had a small number of transfers anyway and also had a disproportionately high percentage of females and of seniors, most campuses showed no conspicuous differences between sexes or class rank of transfers.

Table 1. Percentages of regional campus transfers by sex and Bloomington campus class standing.

Campus N	Male 274	Female 227	Fr. 101	Soph. 197	Jr. 148	Sr. 55	Total N
	%	%	%	%	%	%	
Southeast	65	35	17	48	27	8	48
Columbus	21	79	14	36	29	21	14
Northwest	48	52	22	43	25	10	63
South Bend	50	50	16	46	28	10	68
East	53	47	21	37	37	5	19
Ft. Wayne	65	35	15	40	32	12	105
Kokomo	50	50	18	55	27	-	22
IUPUI	54	46	26	31	30	13	162
TOTAL	55	45	20	39	30	11	501

Both sex and class were found to be related to GPA. On the original campus and on the Bloomington campus, females obtained significantly higher GPAs than males; and upperclassmen did better than underclassmen.

Table 2. Average GPA's for Males and Females

	GPAREgnl.	GPABlgn.
Males	2.73	2.50
Females	2.87	2.63

Table 3. Average GPA's by Class

	GPAREgnl.	(N)	GPABlgn.	(N)
Freshmen	2.64	(230)	2.28	(101)
Sophomores	2.86	(164)	2.48	(197)
Juniors	2.94	(82)	2.70	(148)
Seniors	3.20	(23)	2.97	(55)

As an underpinning to grade point analysis, a comparison among the regional campuses for the variables SATSUM (total of SAT-Math and SAT-Verbal) and GPAREgn1 (GPA the last semester on the regional campus) was made by use of one-way analysis of variance tests. The results of these tests are shown in Tables 4 and 6, with the corresponding campus means in Tables 5 and 7. Both variables show significant differences among the regional campuses.

Table 4. ANOVA Summary Table: SATSUM by Regional Campus

Source	df	Mean Square	F
Campus	7	68798.98	2.60**
Error	440	26464.88	

** $p < .01$

Table 5. Mean SATSUM scores by Regional Campus

Campus	Mean SATSUM	(Rank)	N
Southeast	872	(7)	43
Columbus	925	(4)	10
Northwest	846	(8)	60
South Bend	910	(5)	61
East	931	(3)	14
Ft. Wayne	938	(2)	96
Kokomo	968	(1)	19
IUPUI	890	(6)	145
TOTAL	901		448

Table 6. ANOVA Summary Table: GPA-Regional by Campus

Source	df	Mean Square	F
Campus	7	1.68	3.74***
Error	493	.45	

*** $p < .001$

Table 7. Mean GPA-Regional by Campus

Campus	Mean GPAREgn1.	(Rank)	N
Southeast	2.83	(4)	48
Columbus	3.37	(1)	14
Northwest	2.73	(6)	63
South Bend	2.69	(7)	68
East	2.99	(2)	19
Ft. Wayne	2.96	(3)	105
Kokomo	2.80	(5)	22
IUPUI	2.67	(8)	162
TOTAL	2.79		501

While both variables, SATSUM and GPAREgn1, show significant differences across the regional campuses, these differences are not always in the same direction. For example, students at Kokomo have the highest SAT scores, but their GPAs are close to the average. Students at the Southeast campus, on the other hand, have relatively low SAT scores but average GPAs. Columbus students have average SAT scores but very high GPAs. (This could be explained by the disproportionately large number of females and seniors at Columbus since females and upperclassmen tended to have higher GPAs.) If only those campuses which contributed 30 or more transfer students are considered, the variation in ability as measured by SATSUM and GPAREgn1 becomes even more striking:

Table 8. Mean SATSUM and GPAREgn1 for Regional Campuses (N_{>30})

Campus	Mean SATSUM	(Rank)	Mean GPAREgn1	(Rank)	N
Ft. Wayne	938	(1)	2.96	(1)	105
South Bend	910	(2)	2.69	(4)	68
IUPUI	890	(3)	2.67	(5)	162
Southeast	872	(4)	2.83	(2)	48
Northwest	846	(5)	2.73	(3)	63

Ft. Wayne appears to be the only campus at which grades correspond well to ability. If one were to speculate that grading practices were responsible for the discrepancies seen in the data for the other four large campuses, it would appear that grading is "harder" at South Bend and IUPUI, and "easier" at the Southeast and Northwest campuses.

Once students from the regional campuses arrive on the Bloomington campus they should all be subjected to uniform grading practices. Even though variations do exist in grading practices on the Bloomington campus (from one instructor to another and probably from one school to another) these differences would not systematically be related to regional campuses.

The rank order correlation between SATSUM and GPAREgn1 for the eight campuses was found to be .43. The rank order correlation for SATSUM with GPA after transfer to the main campus at Bloomington (GPAB) however, was found to be .64, lending further support to the contention that differences in grading practices at the regional campuses and between the regional campus and the Bloomington campus might exist. Differences in the overall academic ability of the students (as measured by SATSUM), while they do exist, do not seem to account totally for the fluctuations in the academic performance of the regional campus transfer students, both before and after transfer to the Bloomington campus. Tables 9 and 10, respectively, contain the summary ANOVA statistics and the regional campus means for GPA the first semester on the main campus (GPAB).

Table 9. Summary ANOVA Table: GPA-Bloomington by Campus

Source	df	Mean Square	F
Campus	7	1.77	2.87**
Error	493	.62	

**p<.01

Table 10. Mean GPA-Bloomington by Campus

Campus	Mean GPABlgn	(Rank)	N
Southeast	2.32	(8)	48
Columbus	2.97	(1)	14
Northwest	2.41	(6)	63
South Bend	2.39	(7)	68
East	2.74	(2)	19
Ft. Wayne	2.73	(3)	105
Kokomo	2.63	(4)	22
IUPUI	2.59	(5)	162
TOTAL	2.56		501

Table 11, comparing GPAs on the Bloomington campus and on the regional campus for the five regional campuses that transferred the largest groups, reveals some interesting differences.

Table 11. GPAR and GPAB differences for Regional Campuses (N≥30)

Campus	Mean GPARegn1	(Rank)	Mean GPABlgn	(Rank)	Difference GPAR-GPAB	(Rank)	N
Ft. Wayne	2.96	(1)	2.73	(1)	.23	(4)	105
Southeast	2.83	(2)	2.32	(5)	.51	(1)	48
Northwest	2.73	(3)	2.41	(3)	.32	(2)	63
South Bend	2.69	(4)	2.39	(4)	.30	(3)	68
IUPUI	2.67	(5)	2.58	(2)	.09	(5)	162

Again, the Southeast and Northwest campuses show the greatest discrepancy between regional and Bloomington campus GPAs, while the difference for IUPUI is almost non-existent.

In order to further assess the differences among all 8 regional campuses in the regional and Bloomington campus GPAs, an Analysis of Covariance was performed on the Difference GPA (GPAB-GPAB) by campus controlling for differences in sex, SATSUM, and transfer-in class. Table 12 presents the results of this analysis.

Table 12. ANCOVA: Difference GPA by regional campus controlling for sex, SATSUM, and transfer-in class.

Source	df	Mean Square	F
Main Effects			
Campus	7	1.10	2.32*
Covariates			
Sex	1	.17	.37
SATSUM	1	.38	.80
Class	1	.25	.52
Residual	437	.47	

* $p < .05$

Significant differences therefore do exist among the eight regional campuses in the discrepancies between the GPAs obtained at Bloomington, even when sex, ability (as measured by SATSUM) and transfer-in class status are controlled. A full ordering of all campuses' GPAs follows in Table 13. Again, the greatest discrepancy in GPAs is found for the Southeast campus and the least discrepancy for IUPUI.

Table 13: GPAB and GPAB differences for all regional campuses.

Campus	Mean GPABregl	Mean GPABlgtl	Difference GPAB-GPAB	(Rank)	N
Columbus	3.37	2.97	.40	(2)	14
East	2.99	2.74	.25	(5)	19
Ft. Wayne	2.96	2.73	.23	(6)	105
Southeast	2.83	2.32	.51	(1)	48
Kokomo	2.80	2.63	.17	(7)	22
Northwest	2.73	2.41	.32	(3)	63
South Bend	2.69	2.39	.30	(4)	68
IUPUI	2.67	2.58	.09	(8)	162
TOTAL	2.79	2.56	.23		501

Since no data were collected for a cohort group of non-transfer students, i.e., students who spent both semesters on the Bloomington campus, a comparison of transfer and non-transfer students was not possible in this study. However, if it is assumed that the average GPA difference from one semester to the next for non-transfer students is zero, then further analyses may be conducted.

In order to answer the question "Are the regional campus difference GPAs significantly greater than zero?" eight one-tailed t-tests were performed using the square root of the MSerror for difference GPAs as the best estimate of the population variance. Thus, for each campus

$$t = \frac{\bar{X} - u}{\hat{\sigma}/\sqrt{n}} \quad \text{was computed where:}$$

$\bar{X}$ = mean difference GPA for that campus

$u = 0$ (assumed)

$\hat{\sigma} = \sqrt{\text{MSerror for DiffGPA} \times \text{Campus}} = .6836$

n = the sample size for each campus

Since eight separate t-tests were performed, the chances of one of them being significant purely by chance would be .08 if each test were conducted at the .01 level. Thus each individual campus alpha was set at .001 (1-tailed), resulting in an overall experimental α of .008 (or .01 rounded). Table 14 presents the results of the eight t-tests.

Table 14. t-tests: Are regional campus difference GPAs significantly greater than zero?

Campus	Difference GPAB-GPAB	Calculated t	Critical t $\alpha=.001$ (1-tailed)	N
Southeast	.5129	5.1982*	3.551	48
Columbus	.4029	2.2053	4.221	14
Northwest	.3208	3.7248*	3.460	63
South Bend	.3022	3.6454*	3.460	68
East	.2468	1.5737	3.922	19
Ft. Wayne	.2257	3.3832*	3.373	105
Kokomo	.1664	1.1417	3.819	22
IUPUI	.0910	1.6943	3.291	162

* $p < .001$

Only for Columbus, East, Kokomo, and IUPUI is the mean difference GPA not significantly greater than zero. Thus, we can conclude that for the Southeast, Northwest, South Bend and Ft. Wayne regional campuses (and to varying degrees among these campuses) transfer students' academic performance once they arrive on the Bloomington campus is significantly lower than their performance at the home campus. Though many factors may contribute to the discrepancy between regional campus and Bloomington campus GPA - for example, more lenient grading practices at some of the regional campuses, change in motivation, or adjustment to the larger campus - cause of the discrepancy was not pursued in this study.

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